
NATIONAL SCIENTIFIC COUNCIL ON THE DEVELOPING CHILD

Young Children Develop in an Environment of Relationships

WORKING PAPER 1

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Richard David Scott Chair in Pediatric Developmental Medicine Research, Children's Hospital Boston; Professor of Pediatrics and Neuroscience, Harvard Medical School

Ross A. Thompson, Ph.D.

Professor of Psychology, University of California, Davis

CONTRIBUTING MEMBERS

Susan Nall Bales

President, FrameWorks Institute

William T. Greenough, Ph.D.

Swanlund Professor of Psychology, Psychiatry, and Cell and Developmental Biology; Director, Center for Advanced Study at University of Illinois, Urbana-Champaign

Eric Knudsen, Ph.D.

Edward C. and Amy H. Sewall Professor of Neurobiology, Stanford University School of Medicine

Deborah Phillips, Ph.D.

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Arthur J. Rolnick, Ph.D.

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Betsy Lozoff, M.D.

Professor of Pediatrics, University of Michigan Medical School; Research Professor, Center for Human Growth and Development, University of Michigan

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The National Scientific Council on the Developing Child, housed at the Center on the Developing Child at Harvard University, is a multi-disciplinary collaboration designed to bring the science of early childhood and early brain development to bear on public decision-making. Established in 2003, the Council is committed to synthesizing and communicating science to help inform policies that promote successful learning, adaptive behavior, and sound physical and mental health for all young children. For more information, go to <http://www.developingchild.net>.

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The Issue

HEALTHY DEVELOPMENT DEPENDS ON THE QUALITY AND RELIABILITY OF A YOUNG CHILD'S relationships with the important people in his or her life, both within and outside the family. Even the development of a child's brain architecture depends on the establishment of these relationships.^{1, 2, 3, 4, 5, 6}

Growth-promoting relationships are based on the child's continuous give-and-take ("serve and return" interaction) with a human partner who provides what nothing else in the world can offer – experiences that are individualized to the child's unique personality style; that build on his or her own interests, capabilities, and initiative; that shape the child's self-awareness; and that stimulate the growth of his or her heart and mind.

Young children experience their world as an environment of relationships, and these relationships affect virtually all aspects of their development – intellectual, social, emotional, physical, behavioral, and moral. The quality and stability of a child's human relationships in the early years lay the foundation for a wide range of later developmental outcomes that really matter – self-confidence and sound mental health, motivation to learn, achievement in school and later in life, the ability to control aggressive impulses and resolve conflicts in non-violent ways, knowing the difference between right and wrong, having the capacity to develop and sustain casual friendships and intimate relationships, and ultimately to be a successful parent oneself.

Stated simply, relationships are the "active ingredients" of the environment's influence on healthy human development. They incorporate the qualities that best promote

competence and well-being – individualized responsiveness, mutual action-and-interaction, and an emotional connection to another human being, be it a parent, peer, grandpar-

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ent, aunt, uncle, neighbor, teacher, coach, or any other person who has an important impact on the child's early development. Relationships engage children in the human community in ways that help them define who they are, what they can become, and how and why they are important to other people.

^{7, 8, 9, 10, 11, 12, 13}

In the words of the distinguished developmental psychologist Urie Bronfenbrenner: ... *in order to develop normally, a child requires progressively more complex joint activity with one or more adults who have an irrational emotional relationship with the child. Somebody's got to be crazy about that kid. That's number one. First, last, and always.*

What Science Tells Us

NURTURING AND STABLE RELATIONSHIPS WITH caring adults are essential to healthy human development beginning from birth. Early, secure attachments contribute to the growth of a broad range of competencies, including a love of learning, a comfortable sense of oneself, positive social skills, multiple successful

relationships at later ages, and a sophisticated understanding of emotions, commitment, morality, and other aspects of human relationships. Stated simply, establishing successful relationships with adults and other children provides a foundation of capacities that children will use for a lifetime.^{14, 15, 16, 17}

The “serve and return” interaction between parent and baby – in which young children naturally reach out for interaction through babbling, facial expressions, and gestures and adults respond with the same kind of vocalizing and gesturing back at them – builds and strengthens brain architecture and creates a relationship in which the baby’s experiences are affirmed and new abilities are nurtured. Children who have healthy relationships with their primary caregivers are more likely to develop insights into other people’s feelings, needs, and thoughts, which form

child care setting also influence the development of important capabilities in children, including greater social competence, fewer behavior problems, and enhanced thinking and reasoning skills at school age. Young children benefit in these ways because of the secure relationships they develop in such settings, and because of the ways in which the caregivers provide cognitively stimulating activities and support for developing positive relationships with other children. Unfortunately, the generally poor quality of care provided in many child care arrangements in the United States does not support these benefits because of high caregiver turnover, poorly designed programs, or inadequate preparation of staff. Current research also suggests the additional risk that a greater amount of time in out-of-home care during infancy may be associated with greater disobedience and aggression by the time children enter school.^{12, 22, 23, 29, 30, 31, 32, 33}

Children who develop warm, positive relationships with their kindergarten teachers are more excited about learning, more positive about coming to school, more self-confident, and achieve more in the classroom.

a foundation for cooperative interactions with others and an emerging conscience. Sensitive and responsive parent-child relationships also are associated with stronger cognitive skills in young children and enhanced social competence and work skills later in school, which illustrates the connection between social/emotional development and intellectual growth. The broader quality of the home environment (including toys, activities, and interactions within the family setting) also is strongly related to early cognitive and language development, performance on IQ testing, and later achievement in school.^{12, 18, 19, 20, 21, 22, 23, 24, 25, 26}

Young children also learn a great deal from each other. They learn how to share, to engage in reciprocal interactions (e.g., taking turns, giving and receiving), to take the needs and desires of others into account, and to manage their own impulses. Just being around other children, however, is not enough. The development of friendships is essential, as children learn and play more competently in the rapport created with friends rather than when they are dealing with the social challenges of interacting with casual acquaintances or unfamiliar peers.^{27, 28}

The warmth and support of the caregiver in a

Relationships are important to school adjustment. Children who develop warm, positive relationships with their kindergarten teachers are more excited about learning, more positive about coming to school, more self-confident, and achieve more in the classroom. Relationships with peers also are important. Children who experience greater peer acceptance and friendship tend to feel more positively about the school experience and perform better in the classroom.^{33, 34, 35, 36, 37, 38}

Children have different ways of interacting with their peers. Some are gregarious, others are too shy to get involved (although they want to), some need time to “warm up,” and others are not as interested in being sociable. All of these variations fall within a normal range, and it is essential to differentiate among the many potential reasons (both biological and environmental) that a young child may have limited or difficult interactions with others. Playing cooperatively, making friends, and sustaining friendships over time are not always easy. Any child with severely limited peer involvement is at considerable risk for significant adverse developmental consequences.^{39, 40, 41, 42, 43}

Secure and stable relationships with caring adults assure that young children are adequately nourished; protected from dangerous illnesses, exposure to toxins, and hazards that

can lead to preventable injuries; provided preventive health check-ups; protected from excessive stress; and afforded predictable daily routines that convey a sense of security. These influences contribute significantly to healthy brain development and depend upon the care and support provided by individuals in the community as well as in the family.^{12, 44}

Young children are highly vulnerable emotionally to the adverse influences of parental mental health problems and family violence. One of the most extensively documented of these vulnerabilities is the negative impact of a mother's clinical depression on her young children's emotional development, social sensitivity, and concept of themselves, effects that have been demonstrated in both developmental research and studies of brain functioning. Young children who grow up in seriously troubled families, especially those who are vulnerable temperamentally, are prone to the development of behavioral disorders and conduct problems.^{45, 46, 47, 48, 49}

Animal studies have shown that the quality of the mother-infant relationship can influence gene expression in areas of the brain that regulate social and emotional function and can even lead to changes in brain structure. The nature of the relationship also can have long-term influences (into adulthood) on how the body copes with stress, both physically and emotionally.^{15, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60}

Science indicates that the quality of early parent-child relationships can be strengthened, but successful interventions are more difficult to achieve when relationships are significantly troubled or disturbed. Preventive interventions also can produce a variety of positive outcomes, depending on the extent to which the knowledge and skills of the staff and the quality of the implementation are matched to the magnitude of the challenges being addressed.^{12, 61, 62, 63, 64, 65}

Popular Misrepresentations of Science

AS THE PUBLIC'S APPETITE FOR SCIENTIFIC INFORMATION about the development of young children is whetted by exciting new findings, the risk of exaggerated or misleading messages grows. Within this context, it is essential that scientific fact be differentiated from popularly accepted fiction.

Contrary to common assumptions, scientific evidence shows that the influence of relationships on development continues throughout the lifespan. These relationships are not more important at a particular stage of a child's life compared to another, but the nature of those impacts does vary by age and developmental status.⁴

In contrast to frequently cited concerns, science indicates that young children can benefit significantly from secure relationships with multiple caregivers (within or outside the family), while their attachments to their parents remain primary and central.¹³ There is no credible scientific evidence to support the claim that close

relationships with other nurturing and reliable adults who they trust, especially early in life, interfere with the strength of the young child's primary relationship with his or her parents.

Although young children certainly can establish healthy relationships with more than one or two adults, prolonged separations from familiar caregivers and repeated "detaching" and "re-attaching" to people who matter are emotionally distressing and can lead to enduring problems. There is no scientific evidence to support the belief that frequently rotating relationships with large numbers of adult caregivers provide valuable learning opportunities in the early years of life. Although the importance of sustained, reliable relationships within the family is well understood, the need for stable and predictable relationships in child care settings is acknowledged less frequently, and the disruptive impacts of the abrupt changes related to high caregiver turnover are too often disregarded.^{66, 67}

The Science-Policy Gap

THE IMPORTANCE OF MOTHER-CHILD RELATIONSHIPS is old news. The importance of other family relationships (with fathers, siblings, and grandparents) is semi-old news. The impact of these relationships on the development of the brain is new news. And the important influence of relationships outside of the family – with child care providers, peers, teachers, neighbors, and other adults and children in the community – is even newer, because these individuals are often valued more for what they do than for the meaning of their role in the life experience of very young children. Greater understanding of what science tells us about the importance of a range of relationships for early childhood development leads us to think about many areas of policy and practice in a new light.

“Quality” in early child care and education, for example, is often defined in terms of adult-child ratios, group size, physical facilities, and, more recently, cognitively oriented curriculum. But “quality” is perceived differently when we view child care as a prominent feature of the environment of relationships in which young children develop. The importance of ensuring that relationships in child care are nurtur-

problematic when viewed in relation to extensive scientific evidence of the vital importance of establishing a strong and healthy mother-infant bond beginning in the early months of life. They elicit even greater alarm when viewed in the context of concerns about the potential adverse effects on very young babies of early and extended experiences in out-of-home child care arrangements of highly variable quality.^{71, 72, 73}

For mothers receiving welfare support under Temporary Assistance to Needy Families (TANF), federal rules require that states impose work requirements of 30 or more hours per week.

Although modifications are permissible, about half of the states do not exempt mothers of children less than 12 months of age, and some states permit mandated maternal employment beginning a few weeks after a baby’s birth. When viewed as an adult-oriented employment policy, TANF can be a subject for reasonable debate. But when examined from a child-oriented perspective, it reflects a wide gap between what we know about the importance of early family relationships and what we are doing to promote the health and well-being of our nation’s most vulnerable young children.^{74, 75}

Parental leave policies in the United States currently provide parents of young children with few options.

ing, stimulating, and reliable leads to an emphasis on the skills and personal attributes of the caregivers, and on improving the wages and benefits that affect staff turnover.^{12, 68, 69, 70}

Parental leave policies in the United States currently provide parents of young children with few options. A maximum of only three months of unpaid leave is assured for parents of newborns, and these policies cover only about half of American workers. Of those who are eligible for leave, only those who can get by without earned income can afford to take it, and fewer than half of workers even have this option without risking loss of their jobs. These policies seem highly

Implications for Policy and Programs

THE SCIENCE OF EARLY CHILDHOOD DEVELOPMENT is sufficiently mature to support a number of well-documented, evidence-based implications for those who develop and implement policies that affect the health and well-being of young children. Five compelling messages are particularly worthy of thoughtful consideration:

When considered within the context of a child's environment of relationships, the concept of school readiness is not exclusively a matter of fostering literacy and number skills. It must also include the capacity to form and sustain positive relationships with teachers, children, and other adults, and develop the social and emotional skills for cooperating with others.^{66, 76, 77}

When viewed as an important part of a child's environment of relationships, early childhood education must strive to involve young children in reciprocal learning interactions with teachers and peers rather than isolated "pre-academic" work, and it should capitalize on children's natural interests and intrinsic drive to learn, rather than follow an adult-determined agenda. Stated simply, young children learn best in an interactive, relational mode rather than through an education model that focuses on rote instruction.⁷⁸

Extending the length and coverage of leave currently provided under the Family and Medical Leave Act would provide the critical necessities of time and economic security that are required for parents to develop the nurturing relationships with their children that are essential to healthy development. Much can be learned from other industrialized nations that promote greater parental choice and child well-being by providing subsidized parental leave for those who wish to stay at home with their babies, and affordable, decent quality, early care and education for the children of those who choose or are compelled to return to work.^{73, 78}

In the absence of consistent evidence that maternal employment intrinsically helps or hurts most children, science has little to add to the ongoing political debate about whether paid work should be a mandated requirement for mothers on public assistance. Nevertheless, emerging data that

suggest that maternal employment in the first six months of an infant's life may be associated with later developmental problems, and concerns about the potential adverse impacts of extended out-of-home child care experiences on young children's social development and

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behavior, require thoughtful public discussion. Each raises serious concerns about the potential harm of mandated maternal employment and the limited availability of affordable, high quality child care, particularly for the already vulnerable babies of low-income women on public assistance. It is time for society to weigh the evidence carefully and fashion a more thoughtful policy for parents in the workforce, particularly for those who earn low wages.^{12, 79, 80}

Traditional child welfare approaches to maltreatment focus largely on physical injury, the relative risk of recurrent harm, and questions of child custody, in conjunction with a criminal justice orientation. In contrast, when viewed through a child development lens, the abuse or neglect of young children should be evaluated and treated as a matter of child health and development within the context of a family relationship crisis, which requires sophisticated expertise in both early childhood and adult mental health. The regularized referral of suspected cases of child abuse or neglect from the child welfare system to the early intervention system would assure appropriate developmental and behavioral assessment and treatment as needed. Child abuse prevention strategies that emphasize both the developmental needs of children and the importance of community-based supports for families provide another clear example of how we can close the gap between science and practice for our most vulnerable young children.¹²

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Center on the Developing Child  HARVARD UNIVERSITY

50 Church Street, 4th Floor, Cambridge, MA 02138

617.496.0578

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